

AIR SHOWER AND AIR SHOWER TUNNELS



AIR SHOWER in Use

ESCA Tech Air Showers provide a rapid, effective means to reduce dust contamination from individuals' clothing when entering or leaving a clean area. Air Shower Tunnels are protected passageways that allow large numbers of personnel to rapidly transit into controlled areas.

Air Showers and Tunnels supply high volumes of recirculated, dust free air to lift contaminants from personnel, while they stand, or walk through the specially constructed chamber.

Air flows through pressurized directional nozzles at velocities up to 10,000 feet per minute. The clean, dust free, high velocity air provides efficient scrubbing action to remove particulates from work clothes and protective equipment.

The contaminants are directed downwards through the grilles and hollow walls of the Air Shower and then is filtered through HEPA filters and recirculated.



AIR SHOWER with Top Mounted
Blower Cabinet



AIR SHOWER with Side Mounted Blower
Cabinet Attached to Portable Break Room



AIR SHOWER Tunnel with Top Mounted
Blower Cabinet

ESCA TECH AIR SHOWERS

Features

- Epoxy painted, 16 gauge cold rolled steel construction
- Direct drive blower(s)
- Easy access prefilters
- High capacity HEPA filters, 99.99% efficient at 0.3 microns
- Efficient LED lights
- NEMA 4 (or 12) control panel with motor starter(s)
- Emergency exit switch inside air shower
- High velocity adjustable air nozzles
- Access doors for HEPA and blower service
- Adjustable cycle time

Options

- Stainless Steel Construction
- Aluminized Steel Construction
- Voltage, specify 208, 230, 380, 460 or 575 VAC
- Safety plate glass in doors
- 6 inch raised floor with clean out pan
- Knock down construction
- Choice of number of doors and door swing direction
- Remote mount control panel
- Duct connections for heated or cooled air supply
- Explosion Proof

Capacity -

A minimum of 15 seconds retention time is required to clean the dust off personnel clothes. As retention time increases, the amount of dust removed also increases up to a maximum at about 25 seconds. Additional residence time beyond 45 seconds provides little additional benefit. Cycle time is adjustable.

Retention time can be increased to accommodate large volumes of people by increasing the length of the air shower to form a tunnel. Air Shower Tunnels are formed by assembling multiple modular sections

Air Shower Tunnels can be supplied with or without automatic locking doors.

Emergency exit -

In the event of a power failure, door locks automatically release for exiting. The emergency stop button in the Air Shower sounds an alarm and releases the door locks for exiting.

Effectiveness -

Field test results on an Air Shower that was installed in a battery plant:

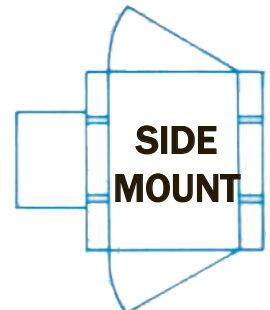
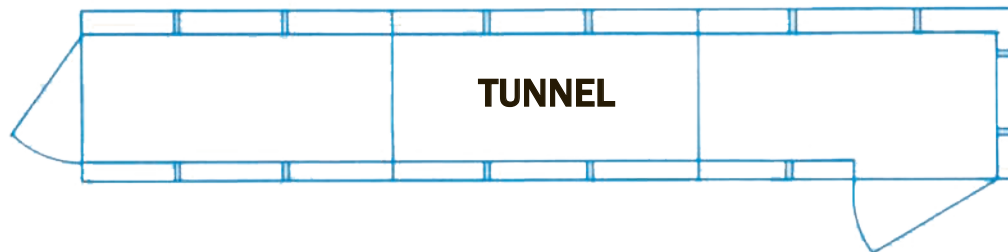
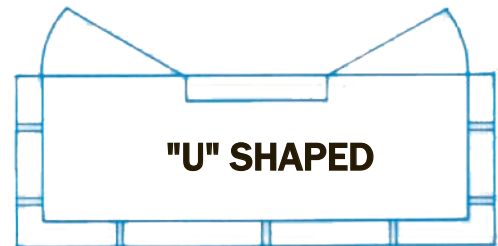
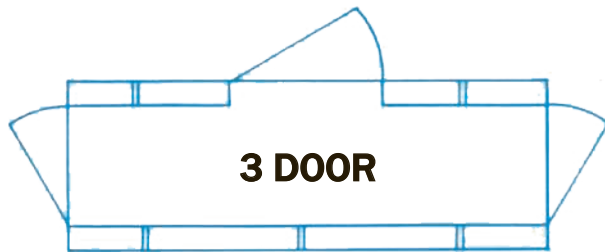
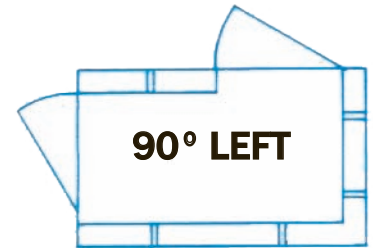
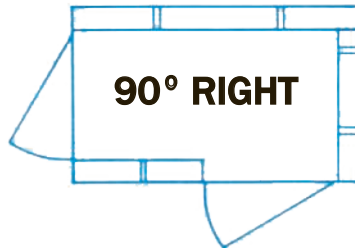
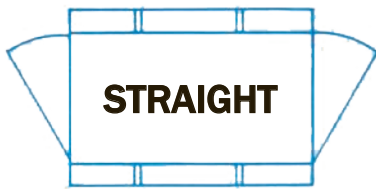
Ambient level of total dust outside the Air Shower Entrance: **12 - 17 mcg/m³**

Ambient level of total dust in the breathing zone inside the Air Shower: **2 - 4 mcg/m³**

Eight hour air sample results inside the Air Shower (250 people on shift): **0.15 mcg/m³**

Dust removed in a 7 day trial period (4,200 cycles) was: **450 grams = 108 milligrams per person**

BASIC FLOOR PLANS



OPTIONAL EQUIPMENT/ OPTIONS

- Safety Plate Glass Doors
- Magnahelic Gauge HEPA
- Magnahelic Gauge Prefilter
- Photohelic Gauges with Alarms
- Grated Floor with Clean Out Pan

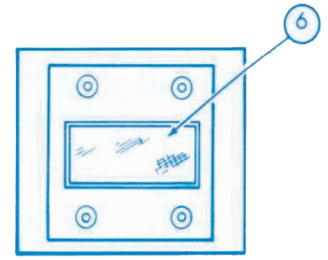
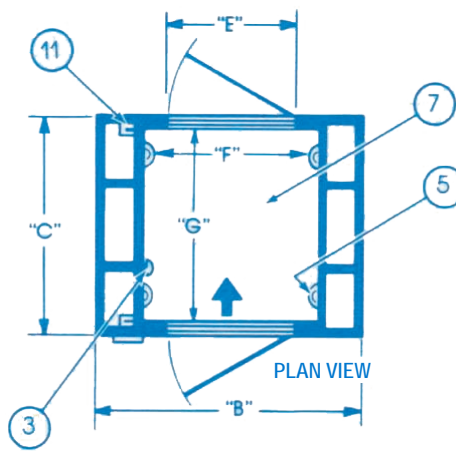
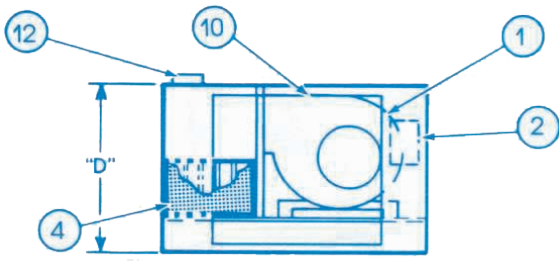
Options:

- L** - 90 L - Shaped
- U** - U Shaped
- 3D** - Three Door
- KD** - Knock Down Assembly
- SM** - Side Mount HEPA, Blower
- TM** - Top mount HEPA, Blower

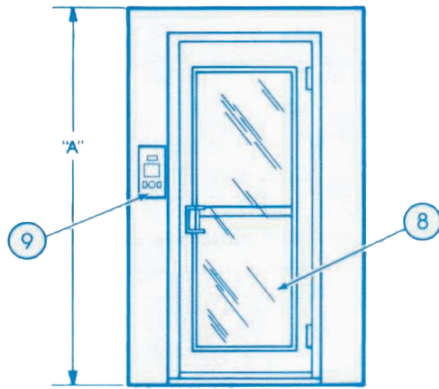
- HFC** - HEPA Filter Ceiling
- RF** - Raised Floor
- RFR** - Raised Floor Return
- EXP** - Explosion Proof

Air Shower Tunnels, also known as down flow booths are used to remove particulate contamination from personnel, their clothing and personal protective equipment. They are typically specified for personnel entering lunch and break areas, clean rooms and sterile rooms. Modular construction allows assembling the basic floor plan styles side by side or end to end.

ESCA Tech Air Showers are warranted for a period of one year from date of delivery. Turnkey installation service is available.



REFLECTED CEILING PLAN



FRONT VIEW ENTRANCE

TYPICAL COMPONENTS

1. Motor/Blower assembly.
2. Power control box.
3. Emergency release button.
4. HEPA filter 99.97% effective on 0.3 micron particles.
5. Adjustable nozzles.
6. Fluorescent light fixture.
7. Automatic personnel sensor.
8. Anodized aluminum doors with plexiglass.
9. Microprocessor control panel - On/Off lights - Reset - Alarm.
10. Access panels for easy maintenance.
11. Electric interlocking chamber.
12. Single junction box.

Construction:
Epoxy painted, 16 ga Cold Rolled Steel or Stainless Steel

Air Showers with Top Mount 5 HP Blowers

Door Size	A	B	C	D	E	F	G
80" x 36"	90	52	as req'd	30	36	39.5	as req'd
84" x 36"	94	52	as req'd	30	36	39.5	as req'd

with raised floor add 6"

Air Showers with Side Mount 5 HP Blowers

Door Size	A	B	C	D	E	F	G	Blower Cabinet L x W x H		
								30	36	96
80" x 36"	96	52	as req'd	NA	36	39.5	as req'd	30	36	96
84" x 36"	100	52	as req'd	NA	36	39.5	as req'd	30	36	100

with raised floor add 6" add 6"

Air Showers with Top Mount 7.5 HP Blowers

Door Size	A	B	C	D	E	F	G
80" x 36"	90	52	as req'd	36	36	39.5	as req'd
84" x 36"	94	52	as req'd	36	36	39.5	as req'd

with raised floor add 6"

Air Showers with Side Mount 7.5 HP Blowers

Door Size	A	B	C	D	E	F	G	Blower Cabinet L x W x H		
								36	36	100
80" x 36"	96	52	as req'd	NA	36	39.5	as req'd	36	36	96
84" x 36"	100	52	as req'd	NA	36	39.5	as req'd	36	36	100

with raised floor add 6" add 6"

AIR SHOWER ELECTRICAL REQUIREMENTS 3 PHASE VOLTAGE

HP	VOLTAGE*	AMPS	CFM
5 HP	208V	15.3	1,800 at 2.0" w.c.
	230V	13.6	
7.5HP	230V	18.3	2,000 at 6.0" w.c.
	460V	9.1	

Controls

